Kasra Ahmadi, Ph.D.

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Education

- University of South Florida, Tampa; **Ph.D. in Computer Science**; 12.2022 – 12.2024; GPA: 3.93/4
- Amirkabir University of Technology, Tehran; M.Sc. in Information Technology; 09.2018 – 09.2021
- Isfahan University of Technology, Isfahan; B.Sc. in Computer Science; 09.2012 – 07.2017

Skills

- **Data**   Airflow, Kafka, Pandas, Kinesis, PowerBI, Postgres, MongoDB
- **Programming** Python (2 years), C, C++, Typescript, Node.js, Java, JavaScript, Bash, QT, QML, SQL
- **Cloud**   S3, EC2, DynamoDB, Aurora, CDN, Load Balancer, IAM, CloudFormation, BigQuery
- **IoT**   Vitis, ARM Cortex-M4, FPGA, Stm32, Raspberry Pi, AVR, Arduino
- **Others**   Git, Docker, Jira, GraphQL, Rest API, Wireshark, Selenium, Postman, Webservice

Work Experience

- **Research Associate, University of South Florida,** Tampa, 12.2022 – present
  Designed, simulated, and implemented Algorithm Level Error detection schemes for Elliptic Curve Cryptosystems and NTT operation, achieving an almost perfect error detection rate of nearly 100% with less than 3-5% additional overhead.
  Performance assessment of PQC schemes e.g. Kyber on lightweight IoT.
  Work under National Science Foundation (NSF) Grant # 1801488;
  Teaching assistant of graduated Operating Systems, Network Lab, and System Design Lab.

- **BI Analyst, Goki Tech,** Sydney, 05.2021 – 05.2022
  Developed **Interactive dashboards** using **Google Data Studio** illustrating Real-time functionality of the hotel's smart lock system.
  Perform ETL operation on user application data, sourced from **Google analytics** and **Databases** destinated in **BigQuery**.
  Conducted **Data analyses** to assist managers in making **data-driven decisions** focusing on **sales** and **marketing** team.

- **Data Analyst, Paar Lift,** 01.2020 – 09.2020
  Analyzed optimal floor levels for elevators at specific times to reduce passenger wait times using machine learning techniques, such as Logistic Regression and KNN.
  Utilized data-driven approaches to enhance elevator efficiency and passenger experience.
  Establishing a connection between Raspberry Pi embedded boards and elevators through the CAN bus protocol for the real-time data transfer of elevators to a Linux-powered IoT.
  Building **ETL pipelines** by using **Apache airflow** to extract, ingest, and load elevator traffic data to an OLAP storage.
  Performing **Data visualization**, **big data** analytics and **statistical modeling** on elevators traffic data.
  We decreased hotels passengers' waiting time by 27%, equating to a time savings of 11 seconds per passenger. Project's demo.

- **Software Engineer, Dodong,** 05.2017 – 12.2019
  Managed a 4-member cross-functional (Frontend, Design, UAT, Mobile) team and coordinated with two business partners toward the successful launch of a realtor platform.
  Perform API development and **RDBMs management**.
  Task assigning and project management using agile framework, scrum and Jira.

Certifications

- **AWS Certified Solutions Architect - Associate**, View Certification (12.2023)
- ETL and Data Pipelines with Shell, Airflow and Kafka, View Certificate (01.2024)
- Divide and Conquer, Sorting and Searching, and Randomized Algorithms, View Certificate (10.2023)

Projects

- **Distributed File Sharing Market Based on Blockchain**
  Deployed a web3 application for a file-sharing marketplace, leveraging the IPFS and Ethereum smart contracts.
- **Secure Microcontrollers Remote Programmer**
  Developed and designed a **QT/QML** application along with a server API using Node.js to enable programming of Microchip microcontrollers remotely while preserving the company's Hex files confidentiality.
- **GPS Car Tracker**
  Utilized STM32 and ArduinoIDE for the hardware implementation. Additionally, Node.js was employed for the server API.
- **Android Game published on Google Play**
  Designed and developed an online Trivia Android game (Footxam) by using **Java** and **Node.js**.